

PERSPECTIVE

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ABSTRACT.— The fact that mankind has desecrated much of the natural world is recognized. The rate of plant and animal extinction has increased in North America from an estimated 3 species per century 3,000 years ago to an average of 143 per century since 1620. Endangered species protection began in the Fish and Wildlife Service in 1938 with the purpose of the Aransas National Wildlife Refuge for the whooping crane. A committee on rare and endangered species was formed in 1962 by the director of the Fish and Wildlife Service and a tentative list was published in 1964. The Endangered Species Acts of 1966, 1969, and 1973, together with subsequent amendments, provide the legislative authority for the present program. The intent of Congress, through this legislative authority, is to avoid irreversible or irretrievable commitments of resources by identifying problems of environmental impact projects early in the planning stage. Examples in the step-by-step development of the legislation and its operation were reviewed.

I certainly sympathize with the difficulty that Tom Lovejoy and Roland Clement had with their presentations prior to mine, but with all due respect I think perspectives are a bit difficult to address. Perspectives are very individualistic things held certainly very precious to those individuals who have them. When organizations or groups have a similar perspective on something, they're often institutionalized. I would not be so presumptive as to try to imply that the Fish and Wildlife Service collectively or myself individually has the only perspective on endangered species and endangered species programs. All we can do is hope that a general public interest and a realistic perspective can be gained by all of those who may affect or be affected by our administering the Endangered Species Act of 1973 as amended.

To have any perspective I think you must have a little historical sense as to how we got here from there. Then I want to get into the nitty-gritty things that are not so much perspective as they are pragmatic problems we're going to have in administering the 1978 amendments. We do not have all the answers to a number of rather weighty questions presented by those amendments, but I would like you to leave here today with at least as much knowledge as we have as to how we're going to proceed.

The fact that we have desecrated much of the natural world is almost given at this

point. There have been various ways to quantify this. Nobody is sure what the quantification means. We are not exact in saying that it means a certain loss to us by having made a given species extinct. At least we do know what happened here in North America. In the 3,000-year period prior to our arrival, the natural extinction rate was about 3 species per 100 years. Since the Puritans arrived at Plymouth Rock in 1620, over 500 species and subspecies of North American flora and fauna have become extinct. Norman Myers expresses the impact we have had on resources, on species and subspecies in an excellent statement, condensing earth's existence down to one calendar year, as follows:

To condense the evolution of life on earth into a more comprehensible frame of reference, suppose the whole history of the planet is contained within a single year. The conditions suitable for life did not develop until late June. The oldest known fossils are living creatures about mid-October and life is abundant for both animals and plants, mostly in the seas, by the end of that month. In mid-December dinosaurs and other reptiles dominate the scene. Mammals appear in large numbers only a little before Christmas. On New Year's Eve at about five minutes to midnight, man emerges. Of these five minutes of man's existence, recorded history represents about the time the clock takes to strike midnight.

The period since 1600 A.D., the one referenced earlier, when man-induced extinction began to increase rapidly, amounts to about three seconds. The quarter-century just begun, when the disappearance of species is put on the scale of all the mass extinctions of the

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past put together, will take one-sixth of a second. So the process by which species have become extinct has been incredibly accelerated by the impact of man.

We have classic cases here in North America, such as the passenger pigeon, which once numbered in the billions and became extinct in 1914. It is very difficult to say what the reaction of the people who lived in that time might have been as these species went by the boards. There were certainly some who were economically sensitive of the loss. Passenger pigeons made great feed for hogs. They could be caught on their roost and killed by the barrel loads with sticks, so there was some reaction, but it was not really a societal attempt, with money behind the movement, to do something about endangered species. It was not until the 1930s, when the 1932 Animal Damage Control Act was passed by Congress (which is still in the operative legislation, incidentally, for federal activities in animal damage control), that there was a hue and cry from the Society of Mammalogists about consequences to vulnerable species. Dr. E. Raymond Hall still remembers vividly his concern as a young man for what had happened to the gray wolf, and he did not like the future prospects.

The Fish and Wildlife Service really began "endangered species" protection, in terms of major fiscal outlays, in 1938 with the purchase of the Aransas National Wildlife Refuge for Whooping Cranes. The cranes at that time had reached a low of 14 birds and were in a very critical situation. The service continued to work on whooping cranes, and in 1956 a coordinating committee was established between the service and representatives of the National Audubon Society to see what could be done about a concentrated effort to save the whooping crane. Since then progress has moved steadily in terms of sensitivity and concern for vanishing animals, but I would emphasize that the early concern was more for animals and more specifically mammals and birds than any consideration of lesser lifeforms. If it had big brown eyes and was cuddly or in some way looked noble, then folks had an increased tendency to love it and be concerned if it was disappearing. Skuas and invertebrates really didn't turn folks on too much then and, as a matter of

fact, they don't turn folks on very much now. That's another story.

In 1962, a committee on rare and endangered wildlife species, composed of the various divisions of the Fish and Wildlife Service, was formed by the director to begin wrestling with the problem of what should be done with these critters for which we should be responsible. By January 1964, a tentative list of endangered species was put together by the service and circulated for review, and this resulted in 1966 as "the red book," the good old red book you may have seen in your libraries on native, rare, and endangered species.

Perspectives. How did we get from the last passenger pigeon in 1914 to a federal action in the late 1960s? It's difficult to say. Endangered species are very difficult animals to think about and the legislation that protects them is a very difficult type of legislation to understand. I think one perspective that folks have on the Endangered Species Act reminds me of Mark Twain's comment on the Bible. He said that he didn't understand very much of it, but what he did understand scared the hell out of him. In many respects this is where we have been with endangered species legislation. The first Endangered Species Act of 1966 was a rather innocuous piece of legislation, in all honesty, and particularly so when compared to the 1973 act. It allowed us to list native, endangered species and to acquire land with Land and Water Conservation Fund monies. There was no procedural requirement as to how things were put on the list, however, and it didn't do a critter a lot of good because being listed afforded no protection from taking. It was, however, a first fledgling step to a meaningful national law protecting endangered species. Also, there was only one category, an endangered species, and an endangered species was basically a basket case, something that was in dire straits. Reference was made to rare species in the red books published in 1966 and 1968 but rare species were not included in legislation. In 1969, a second endangered species act was passed, The Endangered Species Conservation Act, and this act went a bit further than the 1966 act. It did broaden the definition of fish and wildlife to include mollusks and crustaceans, a rather

large step forward because, heretofore, predominant concern had been with vertebrates, mostly those that were lovable. The Lacey Act was amended to allow a broader degree of enforcement by including reptiles, amphibians, mollusks, and crustaceans. Foreign species could be listed for the first time under the 1969 act. A very important international step was taken by the 1969 act when the secretary of the interior was directed to seek the convening of an international ministerial meeting before 30 June 1971, at which would be concluded a binding international convention on the conservation of endangered species. That convention took place and is now the Convention on International Trade in Endangered Species or Wild Fauna and Flora, a very important international agreement to which some 46 countries are now parties. Then came the big one, the Endangered Species Act of 1973, which President Nixon signed into law on 28 December. The Endangered Species Act of 1973 could accurately be described as a "sleeper." I am sure Congress was unaware of the full implications of its provisions.

Tellico Dam is a good case in point. Tellico had been under litigation from local citizens who were opposed to it for a number of years before the snail darter swam into the picture. Perhaps Tellico and the snail darter could be likened to the whale who swallowed Jonah under inverse circumstances. Jonah swallowed the whale and the snail darter seems to have engulfed Tellico Dam. After the snail darter was scientifically described, an emergency rule making listed the species and determined its critical habitat. We were petitioned to do so.

The federal district court in which the case was first tried did not find for the plaintiffs. In addressing the issue of saving either Tellico Dam or the snail darter, they found for the Tennessee Valley Authority. The district court's decision was appealed. It was reversed in the federal appellate court and ultimately came before the U.S. Supreme Court. The Supreme Court also ruled for the snail darter but not in the true context of that statement, in that the Supreme Court said, "Yes, this is really what the Endangered Species Act says. This is what Section 7 of the Endangered Species Act says." It says that all

federal agencies shall insure that actions authorized, funded, and carried out by them do not jeopardize the continued existence of a threatened or endangered species or adversely modify or destroy its critical habitat, and that's what the TVA's actions were clearly going to do. There was no question of that being the ultimate outcome should the dam be completed and the gates closed.

The ripple that reached tidal wave proportions following the decision could perhaps be characterized as the "Chicken Little Syndrome." Do you remember Chicken Little? Chicken Little was out in the barnyard one day when an acorn dropped on his head and he assumed the sky was falling. Other parties with similar federal works projects saw the acorn fall on Tennessee Valley Authority's head and assumed the sky was going to fall. It was Chicken Little all over again. There was a deep concern that economic progress, if you will, including many important public works projects, would be halted because of endangered or threatened species being present.

We felt in the Fish and Wildlife Service at that time, and we still do to this day, that the concern was an overconcern, that we could find no justification for it. The service had completed some 5,000 formal and informal consultations with other federal agencies. Three of those at that time had been litigated. In one instance involving the Indiana Bat and Merramac Park Lake, the court found in favor of the U.S. Army Corps of Engineers both at the district court level and the appellate court level. In the second case involving the Mississippi Sandhill Crane and Interstate 10, the court did find for the plaintiffs, but that highway has since been completed. The questionable interchange is going in. The conflict was resolved ultimately by the Fish and Wildlife Service and the Federal Highway Administration working cooperatively, so we could have our cake and eat it, too—or have our cranes and their interchange, too, if you want to put it like that. We felt there was a degree of overreaction to the problems that were going to be caused by Tellico. We thought it was an anomaly. It was not typical of what the Endangered Species Act was going to do in the future. Nevertheless, a number of individuals

were concerned about this, and a number of bills were put before Congress to address the problem. There were any number of variations on these bills, including specific exemptions for the Tellico Dam and for another TVA project on the Duck River. Some 14 or 15 bills were being considered by Congress, some introduced in the House of Representatives, some in the Senate.

The first thing that happened, in terms of action, was a Senate bill, cosponsored by Senator Culver of Iowa and Senator Baker from Tennessee. This bill presented a mechanism by which an appeal could be made and a project exempted from the Endangered Species Act. A focus was finally made in the House of Representatives on a bill reported out of Mr. Legget's subcommittee which had that provision as well as a preliminary review step by a review board. The outcome of all this was an amendment to the Endangered Species Act which passed Congress in the eleventh hour on 14 October, just before Congress was going to adjourn. Unfortunately, our appropriation authority to administer the Endangered Species Act had expired at midnight on 30 September. We were out of business for two weeks because we had no money to operate the program. The act itself remained in effect, the prohibitions of the act remained in effect, and our obligations to consult remained in effect. However, we had no money to do any of these things. President Carter signed that bill on 10 November at 10:00 p.m. That was the last day the president had to sign the bill before it was pocket vetoed. That made a total of 41 days that the Office of Endangered Species, indeed the endangered species program, was out of business.

We are now back in business. We're digging out and we're trying to understand the 1978 amendments to the Endangered Species Act. I want to go over these with you briefly. They are too complex to focus on in great detail. Again I would qualify an ultimate consideration of what these amendments say to the extent that, until we have a firm reading from our solicitor's office on some finer interpretations of the intent of Congress, we are going to be walking a tightrope blindfolded at times to try to administer these and keep

the intent of Congress uppermost in our minds.

One of the more interesting happenings was a redefinition of critical habitat. There had been no definition of critical habitat in the original 1973 act. It was mentioned in Section 7 of that act and it was defined by regulation by the Fish and Wildlife Service in the Section 7 regulations. The new definition basically confines critical habitat to the geographical area in which a species presently occurs. It does make allowance for consideration of specific areas outside the geographical area where the species is found, but only if these areas are determined to be essential for conservation. What does *essential for conservation* mean? *Conservation* is defined in one place in the act, but we are not sure what the degree of *essential* is.

Another important happening was the definition of species. Tom Lovejoy alluded to the lessening of protection for invertebrates and, at one point, in one earlier bill which was not enacted, there was a rather glaring distinction made against invertebrates—as I recall, something to the effect that they could not have critical habitat determined for them. That was changed in the final act. The major difference made between invertebrates and vertebrates is that we cannot list invertebrates at the population level. They may only be listed at a subspecific level.

Now for Section 7 itself. The key elements for requiring an agency to consult with the Fish and Wildlife Service, if their activities may affect a listed species, are still in place. This has not changed at all. As a matter of fact, the necessity for consultation has been strengthened by these amendments because, without a good-faith consultation, an agency will not qualify for an exemption under other provisions of the act. There is more definition given to the opinion to be rendered by the secretary of the interior, i.e., the director of the Fish and Wildlife service to whom the authority to administer the act has been delegated. It now specifies what must be contained in the biological opinion.

An entirely new element called a biological assessment has been introduced which only applies to agency action for which no contract for construction has been entered

into and for which no construction has begun on the date of the amendments. A biological assessment must be done on projects that fall in this category. The agency that has the action must request from the secretary of the interior a list of proposed or listed species which may be found in the project area. The agency has 180 days in which to conclude a biological assessment to see what indeed is there. The intent of Congress is that you find out the problem in the early planning stage before you get in the middle of a dam and then end up with another confrontation on your hands. During this process and during the consultation process, the action agency cannot make an irreversible commitment of resources.

A federal agency, the governor of a state in which a project is located, or a license or permit applicant whose permit or license is being denied because of endangered or threatened species can appeal for exemption to an endangered species committee. The appellant has 90 days after a biological opinion has been rendered in which to submit this appeal. The endangered species committee is composed of seven members, the chairman of which is the secretary of the interior and the other members being secretaries of agriculture and the army, the chairman of the Council of Economic Advisors, the EPA, the administrator of NOAA, and one person or persons appointed by the president from the state(s) affected by the project action.

Before the committee gets to look at the exemption or the request for one, however, it is first referred to a review board, a second-tier process which was not included in the Baker-Culver amendment from the Senate. This review board has three persons on it, one appointed by the secretary of the interior not later than 15 days after the application, one appointed by the president, and an administrative law judge. It is the job of this review board to examine the application for exemption, and they look at four basic factors: (1) Does an unresolvable conflict exist? (2) Has the agency carried out the consultation in good faith? (3) Did it conduct the biological assessment required of it? (4) Did it refrain from making an irreversible commitment of resources?

Within 60 days after receiving the appli-

cation for exemption, the review board must have been appointed and have positively determined that these criteria have been met. The board reports to the committee, and within 180 days after they make a determination they must recommend to the committee reasonable and prudent alternatives to the action, summarize the evidence as to whether or not the agency action is within the public interest and of national or local significance, and decide if mitigation and enhancement measures should be considered by the committee. Once the committee gets all this in hand it has 90 days to decide whether or not it will exempt a project from the requirements of Section 7. In the process of doing this, the committee must make four findings: that there are no reasonable or prudent alternatives to the agency action, that the benefits of the action clearly outweigh alternative courses consistent with preserving the species or its critical habitat, that such action is in the public interest, and that the action is of regional or national significance. However, after proceeding this far in the exemption process, if the secretary of the interior determines the exemption would cause the extinction of a species, he so advises the committee and the committee has 30 more days in which to decide whether or not the project will cause the extinction of a species by virtue of granting an exemption to the agency action. There is also a review provision by the secretary of state that if the exemption would violate any international treaty or obligation then the exemption cannot be allowed. This will be addressed in the regulations promulgated by the committee itself. They have 90 days after enactment of the 1978 amendments to propose these regulations.

This is the core of how the exemption process works, only the core. The complete, revised version of the act, with the 1978 amendments incorporated, will be available from the Fish and Wildlife Service sometime around 1 January. At the present time, we only have a copy of the signed bill itself and this can be rather confusing unless you are familiar with the 1973 act and can see where all the "wherefore's" and "thou art's" go.

One other thing that the amendments did was to provide for immediate consideration

of exemption for both Tellico Dam and Gray Rocks Dam. The committee has 30 days to begin consideration of both projects and 90 days to decide whether it will exempt. If it fails to act within 90 days, both projects are exempted by virtue of this statute.

There was an amendment to Section 6 of the act which for the first time brings plants under the purview of the grant-in-aid program. Heretofore Section 6 cooperative funds were only available for animals, not plants. Also, the bill authorized our expenditures under the act. I indicated earlier that we went out of business when our appropriation authority expired. We only received 18 months of reauthorization, which means we will go through the same process of having the act reauthorized in 18 months. We anticipate oversight hearings on the Endangered Species Act this spring, probably in both houses of Congress.

What we are going to do about getting on with listing of endangered and threatened species and determining critical habitat for these species is something else again. We had originally planned on some 200 rulemakings in fiscal year 1979. Our present estimate is that maybe 20 to 30 rulemakings will be possible. The reason for this is the greatly increased workload to list a species. It will be a more expensive process; it will be a more time-consuming process. Some of the elements involved in the new listing process are good: holding public hearings, notifying local people that an action is contemplated, publishing in a local newspaper. We think that the increased public involvement in the decision-making process will be beneficial in the long run.

We hope we can resolve some of the concerns that have been expressed over many proposals. It appears, however, that there are a couple of "Catch 22's" in terms of present proposals. There is a two-year expiration provision in the 1978 amendments. It says, in effect, that, if a species or critical habitat has been proposed for two years and it hasn't been finalized within that two-year period, it expires and must be withdrawn by the secretary of the interior. There is a one-year grace period, however, for existing proposals. That one year will be up on 10 November 1979. Over 1,700 plants are proposed. We realize

we will be able to list perhaps a fraction of those. All of the existing critical habitat proposals will more than likely be withdrawn because of the new requirements involved in determining critical habitat. Those requirements include doing an economic analysis and an analysis of other relevant impacts and we're not sure what *other relevant impacts* really means. Here again the lawyer will come to our rescue.

We are going to place in priority form the existing proposals based on degree of threat before the on-year expiration period comes up. We do not have a large staff in the program. Basically the law charges us with the responsibility for the animal and plant kingdoms of the world. We have something less than 200 permanent full-time positions within the endangered species program split between the Office of Endangered Species, Federal Wildlife Permit Office, the Division of Law Enforcement, and the National Wildlife Refuge System. So the dilution of personnel across the program scope is tremendous. It is a challenge, a challenge which we welcome, and the *esprit de corps* within the program has never been higher.

Back to perspectives again. Perspectives are very difficult. At times it is difficult to justify, depending on the individual's perspective, listing a species and perhaps impeding a given project. The question keeps coming back. What good are endangered species or threatened species? Tell us in a very tangible fashion what good a snail darter is. We cannot answer that. We cannot give you a dollar and cent answer to that kind of question. The most lucid comment which addresses this concept, however, is one which was made by Aldo Leopold, who said that the first sign of intelligent tinkering is that you don't throw away any of the parts. With all of our sophistication, I think we are tinkering with phenomena that are much more sophisticated than we. Our concern is certainly for the survival of the species. It is also for the survival and well-being of mankind. It is our posture that, until our knowledge, as a race, as a society, evolves to the point that we can clearly know the consequences of our action by making a species extinct, it is very, very foolish to do so. It may be the part that we needed to make the clock run for another century or so.

QUESTIONS TO DR. SPINKS

- Q. Have I been given an impossible task then to provide for the Fish and Wildlife Service in Utah the data on 200 endangered species of Utah plants?
- A. If you think we're going to do it next week, you'll be disappointed. If you think we're not going to do it at all, you're wrong. It's going to be a lot of jumping through hoops. We've had some other difficult hoops to jump through and our intent is to get this program unwound as rapidly as we can. We've been digging out from 41 days of inactivity, but I feel rather confident in telling you that your data is not going to be gathering dust for an indefinite period of time. If those species for which you are providing the information fall out as priority species having the most danger, the greatest degree of threat, they'll be among the first we get to.
- Q. Is there any aspect of litigation involved in this new amendment? In other words, how do we give people the chance to question something we say is becoming extinct, like the snail darter? Does the applying agency have to provide research funds or try to relocate the snail darter even though they might not be successful in that aspect of threatened or endangered species?
- A. Yes. The committee will actually direct the appealing agency as to what must be done on behalf of that species, and the agency taking the action is responsible for bearing the cost of that. Now in terms of construction projects, this cost is not considered in evaluating the cost-benefit ratio of the project. It will be an additional cost; but it would not, for instance, bring a project below parity and thereby make it unfeasible or illegal to build.
- Q. In all the time limits that have been set, the 30 days, the 90 days, the 180 days, what happens if an agency or committee fails to meet these deadlines?
- A. There is no slap on the wrist if anyone fails to meet the actual time frame. Some of those time frames, incidentally, are negotiable in that the 180-day biological assessment could be lengthened if the agency requested it with agreement between the agency and secretary. If you add up all the maximum time frames, however, including the 180 days, the total is something like 750 days that the entire process could take.
- Q. But there is no traditional mechanism?
- A. No, but the citizen suit provision of the act still applies, and anyone could litigate against any party that failed to meet its deadlines.
- Q. It has been the thrust of the whole program all along that the brunt of the responsibility has fallen on other federal agencies, besides the Fish and Wildlife Service, and private organizations, too. But isn't it true in the West, where field work for proposed species is just starting? Now suddenly I'm being pushed. I know I'm speaking to you in a sense, but I'm also speaking to me. I'm one who elected the people who are passing these things, but 20 or 30 are not going to be enough. We need more people. There are a lot of areas where work needs to be done.
- A. There is a "Catch 22" in everything, I guess. There's also a hiring freeze in the federal government at the moment which affects permanent, full-time posi-
- tions. As a matter of fact, there is nothing we can do about that. I hope you can also appreciate the difficulty of bringing in a permanent part-time or some other less than permanent position and expecting that person to walk in and start doing something productive the next day. It takes a lot of expertise and training to write a decent rulemaking for instance, one that will get by the scrutiny of the solicitors and be legally justifiable and adequate.
- Q. All I'm asking is to just make an effort.
- A. We are.
- Q. Pertaining to the exemption process, other than litigation, where is the avenue for public involvement?
- A. There is a provision which provides the meetings of both the review board and the committee to be open. It will depend on whether the committee decides to take testimony from the public. That point, I'm sure, will be addressed in regulation promulgated by the committee and by the review board. The final decision of the committee is subject to judicial review. It can be appealed to the courts, and there is specific provision in the legislation for that.
- Q. When would you determine the rulemaking for critical habitat for the grizzly bear?
- A. As I indicated earlier, it is very likely that all existing proposed rulemakings for critical habitat will be withdrawn. In effect, that proposed rulemaking would be invalidated and a reproposal would come forth. The reproposal would have to meet the new criteria of the 1978 amendments, including an economic impact analysis and identifying actions or activities within the area which might be affected by having the area designated as critical habitat—both federal actions as well as private actions. We do not have an economist on our staff and, quite frankly, it gives us some heartburn to consider a meaningful economic analysis. I am not being facetious when I say meaningful, because we're not going to try to short-cut the intent of Congress in this thing. They want an economic analysis, one that is meaningful, and that is what they are going to get from us. We don't know where the help is going to come from, perhaps from within the department and other agencies which do have economic expertise.
- A. You recently listed some species in California without listing critical habitat. Are these being considered for withdrawal under new amendments?
- A. No, anything that is already listed that did not have critical habitat determined at the time it was listed will remain a listed species. The amendments say that we may determine critical habitat for these species at some point in time. We can do this; we don't have to do it yesterday. What we do have to do in the future, however, unless it is prudent not to do so, is to propose critical habitat at the same time we propose listing of species, so these two things go along simultaneously. There was no provision for critical habitat in either the 1966 or 1969 acts. That is why we have a huge backlog of listed species that have no critical habitat.
- Q. Isn't it true that any agency must consult the Fish and Wildlife Service before beginning any project?

Do we mean *any* project or are we defining projects?

- A. No, when an agency identifies that its actions may affect listed species, that is when they must initiate consultation. It is the *may affect*. Now the confusing element here may have been my comments concerning construction contracts, projects for which no contracts have been let and for which no construction has begun. These are the ones that would have to do a biological assessment before things could proceed if there are listed or proposed species in the area, but that is different than consultation per se.